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Effects of Interdependence on Motivation, Inter-Team Interaction Processes, and Performance

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13. ABSTRACT (Maximum 200 words) This dissertation explored the performance effects of task interdependence and pay interdependence at the level of analysis of the "division," defined here as an organizational unit composed of multiple teams. The study also examined relationships among task interdependence, pay interdependence, and 3 variables through which task interdependence and pay interdependence were hypothesized to have their effects on division performance, namely, goal priority (i.e., whether priority was given to division-level goals over team-level goals), inter-team information sharing, and inter-team collaboration. Further, an expanded model was tested that included, in addition to the variables noted above, division efficacy, goal difficulty, and task implementation tactics.

In a 3x3 laboratory experiment, 90 divisions composed of 2 3-member teams performed a computer simulation during 2 work sessions, randomly assigned to 1 of 3 levels of task interdependence: independence (teams worked independently of other teams), hybrid interdependence (teams worked somewhat independently and somewhat interdependently), and full interdependence. Divisions also worked under 1 of 3 variable pay structures, in which bonus pay was based on team performance, team and division performance, or

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division performance.

Results indicated a direct, negative effect of task interdependence on performance, which suggests that the experimental task was easier in the task independence condition. There was no direct effect of pay interdependence on performance, and no interaction between task interdependence and pay interdependence. Pay interdependence affected goal priority, which, in turn, influenced inter-team cooperation. (Inter-team cooperation was a composite variable, formed by combining the variables information sharing and collaboration, because of multicollinearity between the two.) Task interdependence had direct effects on both goal priority and inter-team cooperation. In Session 1 only, inter-team cooperation negatively influenced division performance. In Session 2, however, an interaction was found between task interdependence and inter-team cooperation, so that cooperation had positive performance effects in the task interdependence condition. Goal difficulty, which was negatively affected by task interdependence, had positive effects on performance only in Session 2. Division tactics, which were negatively influenced by task interdependence and positively influenced by both pay interdependence and goal difficulty (in Session 2), had a positive effect on performance.

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